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Zastosowanie urządzenia własnego pomysłu do dynamicznej korekcji kręgosłupa

The use of a device of own invention for the dynamic spinal correction

Rozprawa na stopień doktora nauk medycznych i

nauk o zdrowiu

w dyscyplinie nauki o zdrowiu

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4. Streszczenie w języku angielskim

Use of a device of own invention for dynamic spinal correction

Introduction

Body posture is most often associated with the movement habit of each person. A correct one is one in which the shape of the body, resulting from the structure and positioning of its various parts, is conducive to the basic functions and allows physiological functioning. Body alignment is an expression of health, both physical and mental, and is formed on a morphological and functional basis, determined by the force of gravity acting on all parts of the body (head, spine, chest, pelvis, limbs). Such is the daily life of each of us.

When significant musculoskeletal complaints arise - particularly those involving the spine - intervention ranging from rehabilitation to pharmacotherapy to surgery is often necessary. Physical and kinesiotherapy treatment, conducted under professional guidance, is widely known, used and justified. This form of therapy can additionally require the use of pharmacotherapy. The indications for surgical treatment are quite strict and hence the prevalence and popularity of physical and/or kinesiotherapy as non-invasive treatment methods. Surgical procedures are used infrequently, which is why any new method of treatment that expands the panel of rehabilitation of the musculoskeletal system, especially the spine, is expected and sought and developed all the time. Thus, the presented Dynamic Spinal Correction (DSC) device and the results of the work are perfectly in line with this process.

Methods

The dissertation describes the practical use of the DSC device. The study was conducted in a group of 55 healthy volunteers who had no previously diagnosed spinal conditions and reported no complaints of spinal pain. Prior to inclusion in the study, the volunteers were examined by an orthopedic physician, received a referral from him and signed an informed consent to participate in the study. During the ten-minute training on the DSC device, the tests were conducted to assess the amplitudes of spinal torsional movements, and a process was analyzed to confirm and document the spinal rotation assessment system in the rehabilitation process. Both before and during the project, an ongoing search

was made for data in the literature describing the methods and devices most commonly used in the rehabilitation of musculoskeletal disorders.

Results

a) Methodology for use of the DSC device was developed.
b) An assessment of lumbar mobility in the study group of participants was conducted.
c) The descriptive comparison between devices used in the rehabilitation of musculoskeletal disorders was made.

Conclusions

1) The principles and assumptions of preparatory and physiotherapeutic procedures on the DSC device are described and published. In particular, in terms of contraindications and preparation for exercises;
2) The possibility of recording and analyzing each patient's data both during exercise and afterwards has been confirmed. In particular, this includes the ability of spinal osteo-kinematics monitoring;
3) The possibility of assessing the mobility of individual segments of the lumbar spine on the DSC device has been confirmed;
4) The safety of exercises on the DSC device has been confirmed.
5) The methodology developed on the basis of this project, allow us to conclude, that it seems possible to introduce the DSC device as a physiotherapy option in the rehabilitation of selected spinal conditions. Of course, the necessary studies on patients with various ailments in specific locations of the spine needs to be conducted at first.